

AMENDED CLAIMS WITH MARKINGS TO SHOW CHANGES

25. (Currently amended) An apparatus for assisting in the identification of a marked liquid, the liquid comprising a plurality of markers miscible with the liquid and present in a predetermined pattern of relative concentrations, the apparatus comprising:

El a detector for detecting the plurality of markers and for generating signals indicative of relative concentrations of each of the markers, the signals defining a measured concentration ratio pattern; and

a data processor connected to the detector to receive the signals therefrom, the data processor comprising:

a look-up table storing a plurality of known concentration ratios patterns, each concentration ratio pattern corresponding to the signal from a specific combination of the plurality of markers at predefined relative concentrations; and

a ratio pattern comparison element capable of comparing the measured concentration ratio pattern with known concentration ratios patterns of identified liquids, the known ratios patterns being accessible, via the look up table, to the ratio pattern comparison element, so as to permit the identification of the marked liquid.

26. (Previously amended) The apparatus of claim 25, wherein said detector is a spectroscopic detector.

27. (Previously added) The apparatus of claim 26, wherein said spectroscopic detector is an absorption spectrometer.

28. (Previously added) The apparatus of claim 27, wherein said absorption spectrometer is a near infrared spectrometer.

29. (Previously added) The apparatus of claim 27, wherein said absorption spectrometer is a mid-infrared spectrometer.

30. (Previously added) The apparatus of claim 27, wherein said absorption spectrometer operates in the visible spectrum.
31. (Previously added) The apparatus of claim 26, wherein said spectroscopic detector is a fluorescence spectrometer.
32. (Previously added) The apparatus of claim 31, wherein said fluorescence spectrometer is a near infrared spectrometer.
33. (Previously added) The apparatus of claim 26, wherein said spectroscopic detector is a colorimeter.
34. (Previously added) The apparatus of claim 26, wherein said spectroscopic detector is a Raman spectrometer.
35. (Previously amended) The apparatus of claim 25, wherein said detector is limited to those portions of the electromagnetic spectrum associated with select vibrational mode signatures characteristic of said plurality of markers.
36. (Previously amended) The apparatus of claim 25, further comprising at least one additional detector, wherein the detector is limited to that portion of the electromagnetic spectrum associated with a select vibrational mode signature characteristic of a first marker and wherein the at least one additional detector is limited to that portion of the electromagnetic spectrum associated with a select vibrational mode signature characteristic of another of the plurality of markers.
37. (Previously amended) The apparatus of claim 36, wherein the detector measures a nitrile vibration and the at least one additional detector measures an isotopically labeled carbon-nitrile vibration.

38. (Previously amended) The apparatus of claim 36, wherein the detector measures infrared absorption band of a nitrile vibration at 2230 cm^{-1} and the at least one additional detector measures an isotopically labeled carbon-nitrile infrared absorption band at 2140^{-1} cm .

39. (Previously amended) The apparatus of claim 36, wherein the detector measures a nitrile vibration and the at least one additional detector measures an isocyanate vibration.

40. (Previously amended) The apparatus of claim 36, wherein the detector measures infrared absorption band of a nitrile vibration at 2230 cm^{-1} and the at least one additional detector measures an isocyanate infrared absorption band at 2268^{-1} cm .

41. (Previously amended) The apparatus of claim 36, wherein the detector measures absorbance at a wavelength of 520 nm and the at least one additional detector measures absorbance at a wavelength of 550 nm.

42. (Previously added) The apparatus of claim 25, wherein said comparison element is a dedicated microprocessor.

43. (Cancelled)

44. (Previously added) The apparatus of claim 36, wherein said comparison element is a dedicated microprocessor.